WHAT IS CLAIMED IS:

1. An optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer wherein a recording or reading laser beam enters the information recording layer through the light-transmitting layer,

said light-transmitting layer is formed of a resin and has a tensile strength at break of 5 to 40 MPa, a tensile elongation at break of 15 to 100%, and a tensile modulus of 40 to 1,000 MPa.

2. The optical information medium of claim 1 wherein said light-transmitting layer has a thickness of 30 to 200 μm.

3. An optical information medium of claim 1 wherein said light-transmitting layer in an information recording region has a birefringence in absolute value of up to 20 nm at a wavelength of 630 nm and a birefringence distribution breadth of up to 20 nm at a wavelength of 630 nm.

4. An optical information medium of claim 1 wherein said light-transmitting layer has a surface reflectivity of up to 10% at the wavelength of the recording or reading laser beam.

5. An optical information medium of claim 1 wherein R/F is up to 10% wherein R is a residual error component of a focus error signal at a linear velocity during recording or reading and F is a peak-to-peak value of a focus sensitivity curve.

6. An optical information medium of claim 1 wherein

said medium satisfies $Wt \leq 1840e^{-0.04V}$ wherein said light-transmitting layer at its surface has a maximum waviness Wt (in nm) and said medium is moved at a linear velocity V (in m/s) during recording or reading, with the proviso that the recording or reading laser beam defines on the surface of said light-transmitting layer a beam spot having a diameter of up to 300 μm.

7. The optical information medium of claim 1 which is to be operated at a linear velocity of at least 8 m/s.

8. The optical information medium of claim 1 on which recording or reading is performed by a system including an objective lens having a numerical aperture NA and emitting a recording or reading beam having a wavelength of λ wherein $\lambda/NA \leq 780$ nm.

9. An optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer wherein a recording or reading laser beam enters the information recording layer through the light-transmitting layer,

said light-transmitting layer in an information recording region has a birefringence in absolute value of up to 20 nm at a wavelength of 630 nm and a birefringence distribution breadth of up to 20 nm at a wavelength of 630 nm.

10. The optical information medium of claims 9 which is to be operated at a linear velocity of at least 8 m/s.

11. The optical information medium of claim 9 on which recording or reading is performed by a system including an objective lens having a numerical aperture NA and emitting

a recording or reading beam having a wavelength of λ wherein $\lambda/NA \leq 780$ nm.

12. An optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer wherein a recording or reading laser beam enters the information recording layer through the light-transmitting layer,

said light-transmitting layer has a surface reflectivity of up to 10% at the wavelength of the recording or reading laser beam.

13. The optical information medium of claim 12 which is to be operated at a linear velocity of at least 8 m/s.

14. The optical information medium of claim 12 on which recording or reading is performed by a system including an objective lens having a numerical aperture NA and emitting a recording or reading beam having a wavelength of λ wherein $\lambda/NA \leq 780$ nm.

15. An optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer wherein a recording or reading laser beam enters the information recording layer through the light-transmitting layer,

R/F is up to 10% wherein R is a residual error component of a focus error signal at a linear velocity during recording or reading and F is a peak-to-peak value of a focus sensitivity curve.

16. The optical information medium of claim 15 which is to be operated at a linear velocity of at least 8 m/s.

17. The optical information medium of claim 15 on which recording or reading is performed by a system including an objective lens having a numerical aperture NA and emitting a recording or reading beam having a wavelength of λ wherein $\lambda/NA \leq 780$ nm.

18. An optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer wherein a recording or reading laser beam enters the information recording layer through the light-transmitting layer, wherein

said medium satisfies $Wt \leq 1840e^{-0.04V}$ wherein said light-transmitting layer at its surface has a maximum waviness Wt (in nm) and said medium is moved at a linear velocity V (in m/s) during recording or reading, with the proviso that the recording or reading laser beam defines on the surface of said light-transmitting layer a beam spot having a diameter of up to 300 μm.

19. The optical information medium of claim 18 wherein said light-transmitting layer includes a light-transmitting sheet formed of a resin and an adhesive layer which joins the light-transmitting sheet to the supporting substrate side,

said adhesive layer comprising a cured product of a UV-curable resin and having an average thickness of 0.5 μm to less than 5 μm.

20. The optical information medium of claim 18 wherein said light-transmitting layer includes a light-transmitting sheet formed of a resin and an adhesive layer which joins the light-transmitting sheet to the supporting substrate side,

said light-transmitting sheet being constructed from a polycarbonate, polyarylate or cyclic polyolefin by a casting technique.

21. The optical information medium of claim 18 which is to be operated at a linear velocity of at least 8 m/s.

22. The optical information medium of claim 18 on which recording or reading is performed by a system including an objective lens having a numerical aperture NA and emitting a recording or reading beam having a wavelength of λ wherein $\lambda/NA \leq 780$ nm.

23. A method for preparing the optical information medium of claim 18, in which said light-transmitting layer includes a light-transmitting sheet formed of a resin and an adhesive layer which joins the light-transmitting sheet to the supporting substrate side, said adhesive layer being comprised of a cured product of a UV-curable resin,

said method comprising the step of irradiating UV radiation to a coating of the UV-curable resin for curing the resin to form said adhesive layer, the UV radiation irradiated having an energy density of up to 1,000 mW/cm^2.

24. In connection with an optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer, wherein said light-transmitting layer has a birefringence in absolute value of up to 20 nm at a wavelength of 630 nm and a birefringence distribution breadth of up to 20 nm at a wavelength of 630 nm,

a recording or reading method wherein recording or reading is performed by passing a recording or reading laser beam to said information recording layer through said light-transmitting layer.

25. In connection with an optical information medium comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer having a surface reflectivity of up to 10% at a recording or reading wavelength,

a recording or reading method wherein recording or reading is performed by passing a recording or reading laser beam to said information recording layer through said light-transmitting layer.

26. A method for inspecting optical information media comprising a supporting substrate, an information recording layer thereon, and a light-transmitting layer on the information recording layer wherein a recording or reading laser beam enters the information recording layer through the light-transmitting layer,

said method comprising selecting those optical information media in which R/F is up to 10% wherein R is a residual error component of a focus error signal at a linear velocity during recording or reading and F is a peak-to-peak value of a focus sensitivity curve.